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AND INTERFERENCES

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GEORGE S. GABRIEL, NEIL E. CAMPELL, CHIN SOO PARK,
ALBERT P. RUGGIERI, JESSICA R. MATTHEWS, JOHN E. SHEAFFER,
DALE MURRAY, ERIC A. DIETRICH, LYNN IRWIN and RODNEY GERRINGER

Appeal No. 2001-1369
Application No. 09/173,134

HEARD: October 23, 2001

Before FRANKFORT, STAAB, and McQUADE, Administrative Patent Judges.
STAAB, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 1-6, all the claims currently pending in the application.

Background

Appellants' invention pertains to a multipurpose cage level barrier rodent cage (claims 1 and 2), and to a cage level barrier cage ventilated rack and cage system (claims 3-6). Claims 1 and 3

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are representative of the claimed subject matter, and read as follows:

1. A multipurpose cage level barrier rodent cage for housing multiple species of rodents including a plurality of mice or rats in a ventilated rack and cage system, the cage comprising a cage bottom having a plurality of integral side walls, a floor and an open top end, said floor having a length l and a width w wherein:

$80 \text{ square inches} \leq l \times w \leq 110 \text{ square inches}.$

3. A cage level barrier cage ventilated rack and cage system for housing a plurality of types of rodents including a plurality of mice or rats within a cage, the system comprising a double sided rack, the rack having a depth;

at least one cage in said rack, said cage having a cage bottom, the cage bottom having a plurality of integral side walls, a floor and an open top, and the length of the cage being less than substantially 18 inches.

According to appellants (specification, page 3), the invention provides a cage and rack system that increases the density of the rat population housed therein.

The sole reference relied upon by the examiner in the final rejection is:

Lovitt

3,978,819

Sept. 7, 1976

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The following references are relied upon by this merits panel of the Board in support of new grounds of rejection, *infra*, pursuant to 37 CFR § 1.196(b):

Sheaffer et al. (Sheaffer)	4,989,545	Feb. 5, 1991
Coiro Sr. et al. (Coiro)	5,894,816	Apr. 20, 1999
(effective filing date Sep. 30, 1997)		

In addition, in entering said new grounds of rejection pursuant to 37 CFR § 1.196(b), this merits panel of the Board also relies upon appellants' admitted prior art (AAPA) as set forth in the third paragraph of the Background of Invention section of the specification, on page 1 thereof.

The Examiner's Rejection

Claims 1-6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lovitt.

According to the examiner (answer, page 2), Lovitt discloses a multipurpose cage level barrier rodent cage for housing species of rodents in a ventilated rack and cage system comprising a cage having a cage bottom having integral side walls, a floor and an open top, and a rack that is double sided. The examiner concedes that Lovitt does not disclose a cage having a length l and a width w wherein $80 \text{ in}^2 \leq l \times w \leq 110 \text{ in}^2$, as required by claim 1, or a cage having a length less than substantially 18 inches, as required by claim 3. The examiner has taken the position, however, that

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[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to dimension the cage bottom of Lovitt with various length, width, and depth in order to accommodate different sizes of the contained animal(s). In addition, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the cage of Lovitt varied in sizes, since it has been held that where the general experimental conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. [Answer, page 3.]

Appellants argue (brief, page 11) that Lovitt is deficient in two ways:

First, it is not a cage level barrier cage system. Thus, it fails to teach the special environment for which this invention is designed; namely an environment in which the entire environment is controlled by the cage size, materials, food and water supplying mechanisms and the like for this special environment. Secondly, as conceded by the Office Action, the prior art is silent as to the actual dimensions of the cage, and it is error to find an invention obvious where the prior art reference diverges from and fails to teach or mention the invention at hand.

Discussion

As a preliminary matter, we find it necessary to interpret the phrase "cage level barrier . . . cage" appearing in the preamble of claim 1 and the phrase "cage level barrier cage ventilated rack and cage system" appearing in the preamble of claim 3. The Background of Invention section of the specification (page 1) informs the artisan that:

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This invention relates generally to a multipurpose rat cage which may be used as a static unit or in connection with a ventilated cage and rack system for housing a variety of rodent types including but not limited to rats, mice, hamsters and guinea pigs.

Ventilated cage and rack systems are well known in the art. One such ventilated cage and rack system is disclosed in U.S. Patent No. 4,989,545, assigned to Lab Products, Inc., in which an open rack system including a plurality of shelves, each formed as an air plenum is provided. A ventilation system is connected to the rack system for ventilating each cage in the rack. It is known to house rats for study in such a ventilated cage and rack system.

Based on the above quoted portion of appellants' specification, the disclosure on pages 10-14 of appellants' specification and the accompanying drawing figures detailing the particulars of appellants' rack and cage system, and the disclosure of U.S. Patent No. 4,989,545 referred to on page 1 of the specification, we consider that a person skilled in the art would understand the term "cage level barrier rodent cage" appearing in the preamble of claim 1 as referring to a cage having gas impermeable walls and floor that collectively form a barrier at the cage level protecting both lab personnel and the animals contained within the cage from contamination.¹ We also consider that a

¹It appears that there is no proper antecedent basis in the specification for the phrase "cage level barrier . . . cage" found in the appealed claims. The specification should be amended to include antecedent basis for this term in order to
(continued...)

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person skilled in the art would understand the term "cage level barrier ventilated rack and cage system" appearing in the preamble of claim 3 as referring to a cage and rack system comprising one or more cage level barrier cages and a rack for supporting same wherein the rack directly provides air ventilation to and continuously removes exhaust air from the cages supported by the rack.

The thrust of the Lovitt patent applied by the examiner against the appealed claims is the provision of a rack and cage system wherein the cages supported by the rack include perforate floors, and the rack includes an endless belt that traverses the areas beneath the tiers of cages to convey waste materials away from the cages. To this end, the cages comprise bottoms 21 provided as a wirelike grid structure allowing waste materials, such as animal droppings, urine and the like to fall through the bottom by gravity (column 3, lines 17-21). In addition, the side walls may be formed of the same foraminous structure as the bottom (column 2, lines 21-25). Based on the above interpretation of "cage level barrier rodent cage" in the preamble of claim 1, we are in agreement with appellants' argument to the effect that the

¹(...continued)
bring the specification into compliance with 37 CFR § 1.75(d)(1).

Lovitt patent fails to teach or suggest a cage lever barrier cage as called for by claim 1. In this regard, the examiner's position (answer, page 5) that "Lovitt's cage system is a cage level barrier system as defined by the Applicant because it [Lovitt's cage] facilitate[s] in the care and maintenance of the occupants of the cage such as rodents" is not well taken. For similar reasons, we cannot accept the examiner's implicit position that Lovitt's cage system corresponds to the cage level barrier cage ventilated rack and cage system of claim 3. Lovitt simply does not teach or suggest that the rack should incorporate a ventilation system for the cages supported by the rack.

In light of the above, the examiner's § 103 rejection of base claims 1 and 3, as well as the claims that depend therefrom, as being unpatentable over Lovitt cannot be sustained.

New Grounds of Rejections

Pursuant to 37 CFR § 1.196(b), we enter the following new rejections.

Claims 1 and 2 are rejected under 35 U.S.C. § 103 as being unpatentable over Sheaffer in view of Appellants' Admitted Prior Art (AAPA).

Sheaffer, mentioned in appellants' specification (page 1) as being exemplary of ventilating cage and rack systems known in the

art, discloses a cage level barrier rodent cage comprising a cage bottom 22 having a plurality of integral side walls 50 and a floor 22 formed of gas impermeable material, and a filter bonnet 24 (column 3, lines 55-58). Sheaffer's rack for supporting the cages comprises a ventilating system for directly providing air ventilation to and continuously removing exhaust air from the cages supported by the rack. See generally, column 4, lines 25-39; column 5, lines 12-56. In our opinion, the cage of Sheaffer corresponds to (1) the cage of claim 1 except that Sheaffer does not disclose the floor of the cage bottom having a length l and a width w wherein $80 \text{ square inches} \leq l \times w \leq 110 \text{ square inches}$, and (2) the cage of claim 2 except that Sheaffer does not disclose the floor of the cage having a length l and a width w wherein $l \times w$ is substantially 80 square inches.

The portion of appellants' specification we rely upon as admitted prior art (AAPA) reads as follows:

In prior art ventilated cage and rack systems, cages of different sizes are used to accommodate rodents of different types. These cage sizes are selected according to Institute Laboratory Animal Resources (ILAR) guidelines which set non-binding minimums for the size and dimension of cages for particular rodents. For example, for mice that weigh more than 25 grams, a cage having a floor dimension of at least 15 square inches per mouse is required. Similarly, rats up to 400 grams in size require a cage having floor dimensions of at least 40 square inches per rat. Similar requirements are

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mandated for hamsters and guinea pigs by the Animal Welfare Act (AWA).

In our view, AAPA constitutes evidence that one of ordinary skill in the art would recognize the floor area of a cage for laboratory animals to be a parameter that may be varied depending on, among other things, the type and number of animals intended to be housed in order to provide the animals with a hygienic and humane environment. That is, the floor area of a cage for laboratory animals is a variable known in the prior art to be result effective. Generally, it is considered to have been obvious to develop workable or even optimum ranges for such variables. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955); *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). As stated by the court in *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990):

The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims These cases have consistently held that in such a situation, the applicant must show that the particular range is *critical*, generally by showing that the claimed range achieves unexpected results relative to the prior art range. [emphasis in original; citations omitted]

To the extent the statement in the specification that the appellants' cage "increases the density of the rat population per rack without substantially sacrificing the density of other species

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housed in the rat cage" (specification, page 3) may be regarded as an allegation that the floor area range called for in claim 1 and/or the specific floor area called for in claim 2 produces an unexpected result, no evidence has been submitted by appellants to support this position. Accordingly, it is our conclusion, based on the record before us, that it would have been obvious in view of AAPA for an artisan with ordinary skill in the art to determine a set of dimensions for the floor area of Sheaffer's cage that would result in a floor area of 80 square inches in order to provide a cage having a floor area sufficient to efficiently accommodate two (2) rats weighing up to 400 grams each. The resulting Sheaffer cage would be a "multipurpose cage" for housing "multiple species of rodents," as called for in claim 1, in that, while the floor space is optimized for housing two rats weighing up to 400 grams each, a cage having a floor area of 80 square inches would also be capable of housing other species, for example, up to five (5) mice weighing 25 grams each.

U.S. Patent 5,894,816 to Coiro, referred to by appellants on pages 11 and 12 of the brief in support of their position of nonobviousness of the claimed invention, has been considered. To the extent this patent stands for the proposition that cages specifically designed for mice have been standardized to have a

floor area of 75 square inches, this circumstance is not seen as establishing that one of ordinary skill in the art would not have found it obvious to design Sheaffer's barrier level animal cage to optimize its floor space for efficiently accommodating a particular number of rats. In this regard, we note that it is apparently well known in the art to provide a variety of different cage sizes, each presumably designed to house a specific animal species.² In addition, we do not agree with appellants' assertion on page 11 of the brief that Coiro demonstrates a level of skill in the art such that "no one in the industry other than the Applicants has approached the problem of marrying the requirements of all rodent species of interest to provide a common housing which maximizes the efficiency of the 'real estate' available in the cage, rack and lab environment."³ In any event, it is not apparent how the asserted level of skill in the art negatively impacts on the position we take in this new ground of rejection that one of ordinary skill in

²See page 2, lines 6-10, of appellants' specification.

³From our perspective, Coiro's teaching of modifying the shape of the cage bottom so as to increase the usable floor space to slightly over 75 square inches (column 5, line 60-63), presumably to thereby accommodate up to five mice weighing up to 25 grams each, while retaining compatibility with existing wire bar lids and microbarrier tops (column 3, lines 17-19), does not support appellants' position relative to the asserted level of skill in the art.

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the art would have found it obvious to design Sheaffer's cage to optimize the floor space thereof for efficiently accommodating a particular number of rats.

Appellants' argument on pages 13-14 of the brief that the claimed invention has satisfied a long felt but unresolved need in the art has been considered. In that there is no evidence in the record to support this argument, and in that arguments by appellants' counsel cannot take the place of evidence in the record (*In re Payne*, 606 F.2d 303, 315, 203 USPQ 245, 256 (CCPA 1979); *In re Pearson*, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974)), this argument is not well taken.

Claims 3 and 6 are rejected under 35 U.S.C. § 103 as being unpatentable over Sheaffer in view of Coiro.

The Sheaffer and Coiro references have been discussed above. Sheaffer discloses a cage level barrier cage ventilated rack and cage system comprising a number of cage level barrier cages 20 and a rack incorporating therein a ventilation system. Based on the showing of Figure 4, the rack of Sheaffer is considered to be a double sided rack. Sheaffer does not disclose the length of the cage being less than substantially 18 inches. Coiro discloses a cage level barrier cage comprising a cage bottom having an inner length L7 at the receptacle rim of about 11.4 inches (column 5,

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lines 57-59) and an outer length L6 at rim of the receptacle of 11.75 inches (column 4, lines 57-58). Based on this disclosure, we consider the length of the Coiro cage to be "less than substantially 18 inches" as called for in claim 3. It follows that the length 1 of the Coiro cage also "is less than substantially 36 inches" as called for in claim 6. In our opinion, it would have been obvious to one of ordinary skill in the art to utilize a cage level barrier cage of the type disclosed by Coiro in Sheaffer's double sided ventilated rack in order to provide a ventilated cage and rack system comprising cages having a usable floor space of 75 square inches, as taught by Coiro at column 5, lines 60-63, to thereby accommodate up to five mice weighing 25 grams each, while retaining compatibility with existing wire bar lids and microbarrier tops, as taught by Coiro at column 3, lines 17-19.

Appellants' arguments, including those directed to the state of the art as exemplified by Coiro, and long felt but unresolved need in the art, have once again been fully considered. We are of the view, however, that the differences between the subject matter of claims 3 and 6 and the newly applied prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art.

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Summary

The decision of the examiner finally rejecting the appealed claims is reversed.

Pursuant to 37 CFR § 1.196(b), new rejections of claims 1-3 and 6 have been entered.

The decision of the examiner is reversed.

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53131, 53197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

REVERSED; 37 CFR § 1.196(b))

Charles E. Frankfort
CHARLES E. FRANKFORT
Administrative Patent Judge

Lawrence J. Staab
LAWRENCE J. STAAB
Administrative Patent Judge

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